CHAPTER 4
OPERATING INSTRUCTIONS FOR TDRS

NOTE

Refer to TM 9-6920-711-12&P-1 for an explanation of applicable screens and their windows and pull-down menus/screens.

4-1. SYSTEM STARTUP.

Locate and click on the TWGSS/PGS AAR icon in the WINDOWS® program manager.

4-2. SETUP AND OPERATING PROCEDURES.

NOTE

- **Refer to the personal computer (PC) operator's manual for inspection, care/cleaning, startup, and operating procedures.**

- **Refer to TM 9-6920-711-12&P-1 for an explanation of applicable screens and their windows and pull-down menus/screens.**

a. **System Startup and Software Selection.**

    (1) Place PC power switch to ON position.

4-2. SETUP AND OPERATING PROCEDURES (Con't).

NOTE

Windows may be started differently depending on type and setup of the PC. Some PCs will setup directly to Windows and others may require WIN to be typed at disk operating system (DOS) prompt as follows: C:\ > WIN.

(2)   Start Windows. Ensure that the TWGSS/PGS AAR and EXCEL icons are present.

(3)   Locate and click on the TWGSS/PGS AAR icon. AAR Setup Screen will appear.

b.   **TDRS Memory Card Installation.**

(1)   Ensure that the TDRS memory card write protection slide switch is set to "non-write protect" position.

(2)   Install TDRS memory card into PCMCIA drive slot in PC. Ensure that memory card is fully inserted (see PC operator's manual).

c.   **AAR Main Screen Control Card Options.**

(1)   Select New Setup to activate and view preprogrammed data for a selected application previously loaded into the computer memory.

(2)   Select Read/Modify to activate and view data stored on the TDRS memory card currently installed in PC.

(3)   Select PROG card to save the current selected application and setup data on the TDRS memory card.

4-2.   SETUP AND OPERATING PROCEDURES (Con't).

NOTE

There are two methods of selecting application data: from the on-screen application list and from the TDRS memory card.

(4)   Select EXCEL Log to save TDRS memory card setup data on a 3.5 in. disk or computer hard drive. The file is stored as a text file (extension .TXT) in an EXCEL readable format.

d.   **Select Application, Training Area, and Validity.**

(1)   Click on Application list down arrow button. TWGSS/PGS application list will appear.

(2)   Locate and select the desired application. After an application is selected, the configuration number will appear and a graphic display of the selected vehicle will be provided.

(3)   Click on Training area list down arrow button. A list of training locations will appear.

NOTE

Training area selection is not mandatory; however, if the intended training area map is available and downloaded as an AAR map, the selection allows for vehicle presentation during AAR on a map. The current local time standard (standard time (SCT) or daylight savings time (DST)) must also be selected.

(4)   Locate and select the desired training location.

(5)   Click on First insert only to provide selected data to all TWGSS/PGS units when TDRS memory card is first inserted into control panel.

4-2. SETUP AND OPERATING PROCEDURES (Con't).

(6) Click on New ammo to provide selected ammunition and number of rounds to application by weapon type when TDRS memory card is downloaded to control panel.

(7) Click on First insert only (new ammo) to provide selected ammunition and number of rounds to application by weapon type when TDRS memory card is FIRST downloaded to control panel.

e. **Setting Organization Data.**

NOTE

- **Data entered into the Organization window data fields is for information only and does not influence TDRS program results.**

- **Organization data may be changed using the Setup menu on the tool bar and selecting Organization Text.**

(1) Click on Commander text entry box and enter data.

(2) Click on Gunner text entry box and enter data.

(3) Click on Unit text entry box and enter data.

(4) Click on Event text entry box and enter data.

NOTE

Each vehicle or system participating in a training exercise must have a unique identification number. This number may be assigned manually or automatically. The range of numbers will be 1 through 1024.

   (5) Click on ID text entry box and manually enter vehicle ID number.

NOTE

If automatic assignment of ID numbers is selected, the system will automatically increase the ID number by one after each memory card setup is saved. This will ensure that duplicate numbers will not appear.

     (6)   If ID numbers are to be automatically assigned, click on ID auto in. Block.

   f.   **Setting Main Weapon Ammunition Data.**

NOTE

- **The TDRS program has defaulted values that represent the vehicle basic load of ammunition for the selected application.**

- **The number of rounds of ammunition can only be REDUCED. The TDRS program will not accept an ammunition count over the vehicle basic load.**

     (1) In Main weapon ammunition window, select ammunition type and vehicle location and adjust the number of rounds as required.

NOTE

- **The TDRS program has defaulted values that represent ammunition load time by selected application. Load times may be increased or decreased.**

- **All load times are presented in seconds.**

(2)   Click on load time by location and adjust as required.

g.   **Setting Coax Weapon Ammunition Data.**

NOTE

- **The TDRS program has defaulted values that represent the vehicle basic load of ammunition for the selected application.**

- **The number of rounds of ammunition can only be REDUCED. The TDRS program will not accept an ammunition count over the vehicle basic load.**

(1)   In coax weapon window, click on coax weapon ammunition by location and adjust the number of rounds as required.

NOTE

- **The TDRS program has defaulted values that represent ammunition load time by selected application. Load times may be increased or decreased.**

- **All load times are presented in seconds.**

(2)   Click on load time by location and adjust as required.

h.   **Setting Missile Weapon Data.**

NOTE

- **The TDRS program has defaulted values that represent the vehicle basic load of ammunition for the selected application.**

4-2. SETUP AND OPERATING PROCEDURES (Con't).

- **The number of missiles can only be REDUCED. The TDRS program will not accept a missile count over the vehicle basic load.**

(1) In missile weapon window, click on missile weapon by location and adjust the number of missiles as required.

NOTE

- **The TDRS program has defaulted values that represent missile load time by selected application. Load times may be increased or decreased.**

- **All load times are presented in seconds.**

(2) Click on load time by location and adjust as required.

i. **Selecting Exercise Type.**

In exercise type window:

(a) Click on panel gunnery for training exercise with stationary or moving panel targets equipped with center of mass installed retro reflector unit.
(b) Click on combat for force-on-force training exercise with vehicles equipped with turret installed retro reflector units.

j. **Selecting Tracer.**

(1) In tracer window:

(a) Click tracer ON for tracer presentation during training exercise.

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      (b) Click burst ON for burst on target or ground burst effect during training exercise.

NOTE

Obscuration effect can be turned OFF by selecting 0 seconds in text box.

(2) Adjust obscuration time in seconds with a maximum duration of 5 seconds.

k. **Selecting Presentation.**

In presentation window:

      (a) Click audio ON for near miss audio presentation over vehicle intercom system during training exercise.

      (b) Click fire result on CP to ON to view training exercise engagements.

l. **Selecting Firing.**

(1) In firing window:

      (a) Click full scale ON for training exercise with targets at 1:1 scale.

NOTE

If scaled training is selected, TWGSS targets are 1:2 scale (half scale).

      (b) Click scaled gunnery ON for training exercise with scaled targets.

4-2.   SETUP AND OPERATING PROCEDURES (Con't).

NOTE

If tracking training is selected, tracking time must also be established. Main and coax weapon tracking time may be 3-120 seconds.

      (c) Click tracking training ON for tracking training exercise.

      (d) Click on setup and adjust Tracking time out and figure of merit value.

    (2) Click ammo dispersion ON to add the following ammunition dispersion to the training exercise:

      (a) 0.3 mils will be added to main gun (105/120 mm).

      (b) 0.5 mils will be added to main gun (25 mm).

      (c) 1.0 mils will be added to coax (7.62 mm).

      (d) No dispersion will be added to missile (TOW).

    (3) Click setup OK to save selected firing and dispersion to TDRS setup.

CAUTION

DO NOT select PROG card if data on TDRS memory card is still required. PROG card will DELETE all current TDRS memory card data.

4-2. SETUP AND OPERATING PROCEDURES (Con't).

NOTE

- **When PROG card is selected, the program will confirm assigned identification number, number of rounds of ammunition, and obscuration time. If values exceed maximum allowable values, an error message will appear.**

- **After PROG card is selected, a DOS window will appear. When the window disappears and an error message has not appeared, the save process is complete and the TDRS memory card is ready for use.**

(4) Click on PROG card to save AAR main screen setup.

4-3. AAR PROCEDURES.

NOTE

- **Refer to PC operator's manual for inspection, care/cleaning, startup, and operating procedures.**

- **Refer to TM 9-6920-711-12&P-1 for explanation of applicable screens and their windows and pull-down menus/screens.**

a. **System Startup and Software Selection.**

(1) Place PC power switch in ON position.

4-3.   AAR PROCEDURES (Con't).

NOTE

Windows may be started differently depending on type and setup of the PC. Some PCs will setup directly to Windows and others may require WIN be typed at DOS prompt as follows C:\>WIN.

(2)   Start Windows. Ensure that TWGSS/PGS AAR and EXCEL icons are present.

(3)   Locate and click on the TWGSS/PGS AAR icon. AAR Setup screen will appear.

b.   **TDRS Memory Card Installation.**

(1)   Ensure that the TDRS memory card write protection slide switch is set to "non- write protect" position.

(2)   Install TDRS memory card into PCMCIA drive slot in PC. Ensure card is fully inserted (see PC operator's manual).

c.   **AAR Data.**

(1)   Click on AAR List. A blank AAR List screen will appear.

NOTE

- **TDRS AAR data may be selected and viewed by two methods: AAR List which provides results of all gunnery events and AAR Map which adds maneuvering vehicle(s) and firing events as part of the AAR utilizing the gunnery events and training area map.**

- **The AAR List screen has four control buttons: Setup, AAR List, AAR Map, and Multiple cards.**

     (2)   Click on Multiple Cards to view or download multiple TDRS memory cards in computer.

     (3)   Click on AAR List to view exercise events listing.

     (4)   Click on AAR Map to view and link AAR listing to training area map.

NOTE

If multiple card is selected, firing result in listing will be deleted.

     (5)   Click on Setup to return to setup screen.

NOTE

The AAR List screen is divided into four areas: Organizational Data, List Controls, Graphic Display, and Events List. Each area may be accessed and selected items may be changed.

d.   **Viewing AAR Data.**

     (1)   Click on Read Log to download and view AAR data stored on TDRS memory card currently installed.

     (2)   If multiple TDRS memory cards have been downloaded, click on Players ID list down arrow to view ID numbers or select one for viewing.

4-3.   AAR PROCEDURES (Con't).

e.   <u>**Graphic Display Selections**</u>**.**

NOTE

AAR provides two types of silhouettes for presentation of firing event results: panel gunnery which provides results of panel gunnery exercises with ammunition fired and range-to-target displayed at the bottom of silhouette; and general which provides results of force-on-force exercises with ammunition fired and range-to-target displayed at the bottom of silhouette.

(1)   Click on Clear to remove all presented impact points from current silhouette. If a fire event is selected on the events list, the last impact point will not be cleared.

(2)   Click on silhouette list down arrow to select general or panel gunnery silhouette.

NOTE

When an exercise event is selected from the events listing, the following information will be provided within the graphic display area of the AAR list screen:

    a.   time and date of selected event
    b.   impact point on selected silhouette
    c.   turret position in relation to
        hull at time of impact
    d.   fired ammunition and range
        to target for firing results
    e.   ammunition, point of impact,
        and aspect angle for target
        result

4-3. AAR PROCEDURES (Con't).

   f.   **Events List Selections.**

NOTE

Five options are provided for selecting and viewing exercise events: All Events, Hits, Gunnery, Other, and System.

     (1)   Click on All Events to view all information collected during exercise. Data is presented in the order in which it occurred.

     (2)   Click on Hits to view target system events. Events will be presented in the order in which they occurred. Target system events are as follows:

         (a)   impacts from TWGSS-/PGS-/MILES-equipped vehicles
         (b)   control gun activation
         (c)   auto activation of target system (panel gunnery only)
         (d)   tamper (combat only)

     (3)   Click on Gunnery to view firing results. Firing results will be presented in the order in which they occurred. Firing events are as follows:

         (a)   fire events
         (b)   reload turret and or hull
         (c)   uploading of ammunition
         (d)   tracking training events

     (4)   Click on Other to view laser rangefinder (LRF) firing, laser alignment, and system power ON.

     (5)   Click on System to view information regarding system errors and BIT indications. Data is presented in the order in which it occurred.

4-3.   AAR PROCEDURES (Con't).

g.   **AAR Events List.**

         The AAR events list provides the results of training exercise
in the order of occurrence and reflects the selections made within
the Setup Select Log Data window.

    (a) **Date.** Day-month-year
    (b) **Time.** Hour-minute-second
    (c) **Event.**   Fire, target, tracking, load, reload,
         CGUN, LRF, BIT, tamper, power ON, new mode,
         and new date.
    (d) **Mov.** Moving = Y or not moving = N
    (e) **Ammo.**

         1.   Fire   event,   ammo   type   and   rounds
remaining.

         2.   Target event, ammo type code

    (f) **Range Actual.** Actual range of firing vehicle to
         target.
    (g) **Range Crew.**   Vehicle fire control system
         selected range.
    (h) **Azim (m).**   Impact point in relation to target
         center of mass. Left (L) or Right (R) of center of
         mass.
    (i) **Elev (m).** Impact point in relation to target center
         of mass. Up (U) or Down (D) of center of mass.
    (j) **ID.**   Firing event = Player ID number and target
         event = Player ID number of attacking vehicle.
    (k) **Aspect.** Target vehicle point of impact aspect
         angle. There are 12 aspect sectors for the turret
         and 12 for hull. The front of the target vehicle is
         12:00 position.
    (l) **Cant.** Provides firing vehicle cant angle.
    (m) **Effect.** Target results:

4-3. AAR PROCEDURES (Con't).

NOTE

**The percent (%) values reflect the probability
of kill for target events.**

1. <u>HIT</u>. Vehicle is hit but not killed.
2. <u>MOBILITY KILL</u>. Vehicle is hit and cannot
   move. If vehicle is not stopped within 30
   seconds, this becomes a catastrophic kill.
3. <u>WEAPON KILL</u>. Vehicle fire control system
   and/or weapon system damaged.
4. <u>KILL</u>. Catastrophic.
5. <u>MISS</u>.
6. <u>NO EFFECT</u>.
7. <u>AUTO ACTIVATE</u>.

h. **AAR List Command Buttons.**

NOTE

**There are six command buttons provided for
the AAR List: Read Log, Print Log, Save Log,
Read Saved, and EXCEL.**

(1) Click on Read Log to view stored TDRS memory card
data.

(2) Click on Clear to clear AAR list screen.

(3) Click on Read Saved to view data stored on computer
hard drive without TDRS memory card installed. Also provides a
means to delete exercise data and notes stored on hard drive prior
to returning computer to TSC.

(4) Click on Save Log to save current or selected TDRS
data to computer hard drive. This button also provides a means to
record and store notes regarding the training exercise.

4-3. AAR PROCEDURES (Con't).

(5)   Click on Print Log to send current or selected memory card data to a printer.

NOTE

The selection of EXCEL will store ALL data selections made under the Display Log column within the Select Log Data window.

(6)   Click on EXCEL to save TDRS memory card display data to a 3.5 in. disk or computer hard drive. The file is stored as a text file (extension .TXT), in a format that EXCEL can read.

4-4. SETUP AND TRACKING TRAINING.

NOTE

• **Refer to PC operator's manual for inspection, care/cleaning, startup, and operating procedures.**

• **Refer to TM 9-6920-711-12&P-1 for an explanation of applicable screens and their windows and pull-down menus/screens.**

a.   **System Startup and Software Selection.**

(1)   Place PC power switch in ON position.

NOTE

Windows may be started differently depending on type and setup of the PC. Some PCs will setup directly to Windows and others may require WIN be typed at DOS prompt as follows C:\ > WIN.

(2)   Start Windows. Ensure that TWGSS/PGS AAR icon is present.

(3)   Locate and click on the TWGSS/PGS AAR icon. AAR Setup screen will appear.

   b.   **TDRS Memory Card Installation.**

(1)   Ensure that the TDRS memory card write protection slide switch is set to "non-write protect" position.

(2)   Install TDRS memory card into PCMCIA drive slot in PC. Ensure card is fully inserted (see PC operator's manual).

   c.   **Target Tracking AAR Data.**

(1)   Click on AAR List.   A blank AAR List screen will appear.

NOTE

- **Target tracking AAR data may be selected and viewed by two methods: AAR List which provides results of all target tracking and gunnery events and Target tracking display which provides a view of the tracking event in elevation axis, azimuth axis, and aim point track overlay on a panel or silhouette target.**

- **The AAR List screen has four control buttons: Setup, AAR List, AAR Map, and Multiple cards .**

(2)   Click on AAR List to view exercise events listing.

4-4.   SETUP AND TRACKING TRAINING (Con't).

(3)   Click on Multiple Cards to view or download multiple TDRS memory cards in computer.

NOTE

The AAR List screen is divided into four areas: Organizational Data, List Controls, Graphic Display, and Events List. Each area may be accessed and selected items may be changed.

d.   **Viewing Tracking Data.**

(1)   Click on Read Log to download and view AAR data stored on TDRS memory card currently installed.

(2)   If multiple TDRS memory cards have been downloaded, click on Players ID list down arrow to view ID numbers or select one for viewing.

(3)   Select and double click on Tracking event within AAR event list. The selected event will appear.

NOTE

• **Five control buttons are provided on the Target Tracking display screen: Restart, Stop, Continue, Close, and Show track.**

• **Three tracking viewing areas are available on the display screen: Elevation (flank view) scaled in tracking time for ballistic weapons and meters for missiles, Azimuth (viewed from above), scaled in tracking time for ballistic weapons and meters for missiles, and Aiming point track overlaid on panel or silhouette target.**

4-4.   SETUP AND TRACKING TRAINING (Con't).

- **Target tracking time for ballistic weapons 3 to 120 seconds.**

- **Figure of merit value is an indication of the time the aiming point circle remained on the target center of mass area.**

(4)   Click on Restart to restart the tracking event display.

(5)   Click on Stop to stop the event.

(6)   Click on Continue to continue event after stopping.

(7)   Click on Show track to view track overlay on panel or silhouette target.

(8)   Click on Close to return to AAR list screen.

4-5.   SETUP AND VIEWING OF AAR MAP SCREEN.

NOTE

- **Refer to PC operator's manual for inspection, care/cleaning, startup, and operating procedures.**

- **Refer to TM 9-6920-711-12&P-1 for an explanation of applicable screens and their windows and pull-down menus/screens.**

a.   **System Startup and Software Selection**.

(1)   Place PC power switch in ON position.

NOTE

Windows may be started differently depending on type and setup of the PC. Some PCs will setup directly to Windows and others   may require WIN be typed at DOS prompt as follows C:\ > WIN.

(2)   Start Windows. Ensure that TWGSS/PGS AAR icon is present.

(3)   Locate and click on the TWGSS/PGS AAR icon. AAR Setup screen will appear.

b.   **Viewing AAR Map.**

(1)   Click on AAR map button to view map screen.

NOTE

The AAR Map screen provides six buttons for setup and selecting training events.

(2)   Click on File to view and/or select map file options.

(3)   Click on Setup to view and/or select map setup options.

(4)   Click on Display Control to view and/or select map commands and Track/Event mapping options.

(5)   Click on Exercise Area to view and/or select from exercise area database and to select or edit targets or map.

(6)   Click on View to select redraw function**.**

(7)   Click on Window to select setup and return to setup screen or AAR list screen.

4-5.   SETUP AND VIEWING OF AAR MAP SCREEN (Con't).

NOTE

The ARR Map screen has seven control buttons and a check block for multiple TDRS memory cards.

(8)   Click on Setup to return to setup screen.

(9)   Click on AAR List to return to AAR list screen.

(10) Click on AAR Map to view selected exercise area map.

(11) Check Multiple cards block to view force-on-force events.

(12) Click on Read Log to download stored TDRS memory data to mapping program.

(13) Click on Clear to remove tracking and event markers from current display.

(14) Click on Read Saved to select or delete a saved AAR exercise data.

(15) Click on Save Log to save and rename the current TRDS log file data.

  c.   **Creating Exercise Area.**

NOTE

Creating an exercise area database is a three step process: Determine if PC contains required exercise area (map); Compile exercise area and target placement data; and Create exercise area by programming map and target reference data.

4-5.   SETUP AND VIEWING OF AAR MAP SCREEN (Con't).

(1)   Click on Exercise Area and select Exercise Area Database menu.

(2)   Click on Exercise in database list down arrow button to view stored exercise areas. Click on desired exercise area.

(3)   Click on Load selected Exercise Area from database to download selected exercise area to computer working memory.

(4)   Click on Delete selected Exercise Area in database to delete exercise areas that have been updated or that are no longer required.

(5)   Click on Save current Exercise Area in database to save a new or modified exercise area.

d.   **Modifying Exercise Area.**

NOTE

The Edit Map option is used to download new maps and to modify existing maps of exercise areas. A map of the intended training area is required for the following steps.

(1)   Click on Exercise Area and select Edit Map to view map edit menu.

(2)   Click on Conversion parameters.

(3)   Record ALL programmed parameters for that location from the Log to map conversion menu. Click on OK.

(4)   Click on Resize map to automatically resize the map.

(5)   Locate and click on the upper left corner and lower right corner of map.

4-5. SETUP AND VIEWING OF AAR MAP SCREEN (Con't).

NOTE

A scale factor larger than 1 will enlarge the map and a scale factor between 0 and 1 will make the map smaller.

(6)   Input map size scale factor and click on OK.

NOTE

A map of the intended training area is required for the following steps. The longitude and latitude coordinates of the training area in UTM format is also required.

(7)   Click on Scale map button.

(8)   Using a map of training area, select two points diagonal from each other.

(9)   Determine the longitude and latitude of the first point and in UTM format, input the coordinates in text boxes in Scaling window.

(10) Click on OK.

(11) Determine the longitude and latitude of the second point and in UTM format, input the coordinates in text boxes in Scaling window.

(12) Click on OK.

(13) Click on Recolor map to view and select color options.

(14) Select color options. Click on OK.

   e.   **Saving Modified Exercise Area.**

NOTE

When the map conversion parameters (size, scale, and color) have been entered, an exercise area has been created and must be saved to the database.

      (1)   Click on Exercise Area and select Exercise Area Database.

      (2)   Click on Save current exercise area to database.

      (3)   Enter a new map name and save to database by clicking on OK.

   f.   **Adding New Exercise Area.**

NOTE

If a new training area is to be added to the database, it is downloaded from a disk containing a scanned map in correct file format (*.BMP). Install disk in A drive on PC.

      (1)   Click on Exercise Area and select Edit Map to view map edit menu.

      (2)   Click on Read new map from file.

      (3)   Select A drive and the file to be downloaded. The file (map) will be read into the computer memory and displayed on the screen presentation area. Click on OK.

      (4)   Click on Resize map to automatically resize the map.

(5)   Locate and click on the upper left corner and lower right corner.

NOTE

A scale factor larger the 1 will enlarge the map and a scale factor between 0 and 1 will make the map smaller.

(6)   Input map size scale factor and click on OK.

NOTE

A map of the intended training area is required for the following steps. The longitude and latitude coordinates of the training area in UTM format is also required.

(7)   Click on Scale map.

(8)   Using a map of training area, select two points diagonal from each other.

(9)   Determine the longitude and latitude of the first point and in UTM format, input the coordinates in text boxes on Scaling window.

(10) Click on OK.

(11) Determine the longitude and latitude of the second point and in UTM format, input the coordinates in text boxes on Scaling window.

(12) Click on OK.

(13) Click on Recolor map to view and select color options.

(14) Select color options. Click on OK.

g.   **Saving New Exercise Area.**

NOTE

When the map conversion parameters (size, scale, and color) have been entered a exercise area has been created and must be saved to the database.

(1)   Click on Exercise Area and select Exercise Area Database.

(2)   Click on Save current Exercise Area in database.

(3)   Enter a new map name and save to database by clicking on OK.

h.   **Creating a Grid Map.**

NOTE

If the exercise areas stored in the computer database do not represent an area required for training, a grid map may be created. This will allow presentation of training exercises on ranges not programmed into the computer.

(1)   Click on Exercise Area button and select Edit Map to view map edit menu.

(2)   Click on Conversion parameters.

(3)   Record ALL programmed parameters for that location from the Log to map conversion menu.

4-5.   SETUP AND VIEWING OF AAR MAP SCREEN (Con't).

(4)   Click on Create new grid map.

(5)   Click on two points on the map to create the grid size.

(6)   Program the number of grids required by counting the number of grids from the center to the edge of area to be utilized during training.

(7)   Click on Resize map to automatically resize the map.

(8)   Locate and click on the upper left corner and lower right corner of map.

NOTE

A scale factor larger than 1 will enlarge the map and a scale factor between 0 and 1 will make the map smaller.

(9)   Input map size scale factor and click on OK.

NOTE

A map of the intended training area is required for the following steps. The longitude and latitude coordinates of the training area in UTM format is also required.

(10) Click on Scale map.

(11) Using a map of training area, select two points diagonal from each other.

(12) Determine the longitude and latitude of the first point and in UTM format, input the coordinates in text boxes on Scaling window.

(13) Click on OK.

4-5.   SETUP AND VIEWING OF AAR MAP SCREEN (Con't).

(14) Determine the longitude and latitude of the second point and in UTM format, input the coordinates in text boxes on Scaling window.

(15) Click on OK.

(16) Click on Recolor map to view and select color options.

(17) Select color options. Click on OK.

i.   **Programming New AAR Targets.**

NOTE

Programming of panel gunnery targets requires an inspection of the training area to be used and the performance of the following steps. Also all longitude and latitude data collected MUST be in UTM format.

(1)   Inspect target position to ensure correct target type, target position, and that the field of view is unobstructed from firing position.

(2)   Determine and record the target and firing positions using an area map or handheld GPS receiver.

(3)   Determine and record the distance from exercise area firing positions to target locations using TWGSS/PGS transceiver or a map. This range information will aid in determining which target was engaged during AAR.

(4)   Click on Exercise Area and select Edit Target to view target edit menu screen.

(5)   Verify that correct exercise area is selected.

(6)   Click on New Target and enter type of target.

(7)   In UTM format, enter the longitude and latitude positions in text boxes.

(8)   Enter Note to describe the physical position of the target on exercise area.

(9)   Click on Target Symbol to view, select, and size the appropriate target symbol.

(10) Enter the target width, length, and turret diameter. Click on OK to save.

(11) Click on Target Color to view and select target color. Select color and click on OK to save or correct data and return to target edit screen.

(12) Click on New Target to input additional targets.

(13) To edit exiting targets, select target from the target drop down list box. This will allow edits to be made to programmed targets.

(14) Click on Delete Target to delete a target by first selecting the target from Target drop down box.

(15) Click on OK.

j.   **Saving Target Data to Exercise Area.**

(1)   Click on Exercise Area and select Exercise Area Database.

(2)   Click on Save current exercise area in database.

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   (3)   Enter a new map name and save to database by clicking on OK.

  k.   **Editing Target Data Within Existing Exercise Area.**

   (1)   Click on Exercise Area and select Edit Target option to view target edit menu screen.

   (2)   Verify that correct exercise area is selected.

   (3)   To edit existing targets select target from the target drop down box. This will allow edits to be made to programmed targets.

  l.   **Saving Edited Target Data to Exercise Area.**

   (1)   Click on Exercise Area and select Exercise Area Database.

   (2)   Click on Save current exercise area in database.

  m.   **TDRS Memory Card Installation.**

   (1)   Ensure that the TDRS memory card write protection slide switch is set to "non-write protect" position.

   (2)   Install TDRS memory card into PCMCIA drive slot in PC. Ensure card is fully inserted (see PC operator's manual).

  n.   **Evaluating Training Using AAR Map.**

   (1)   Click on AAR Map.

   (2)   Click on Exercise Area and select Exercise Area Database.

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(3)   Select and then load exercise area used from exercise area database drop down list.

(4)   Select Multiple cards block if several TDRS memory cards will be downloaded to the computer. If only one card is loaded unselect multiple card block.

(5)   Insert TDRS memory card(s) into computer and select Read Log.

(6)   A dialog box will appear for each TDRS memory card loaded containing information about the card owner, vehicle symbol, and color.

NOTE

The vehicle with SHOW EVENTS checked is the reference vehicle for the AAR.

(7)   Check the Show Events block if this is the main vehicle to follow during AAR. This vehicle selection may be changed at any time during the AAR by clicking on selected vehicle. Click on OK.

(8)   Click on Run to start the AAR. The AAR will start with vehicle(s) presented on the exercise area map.

(9)   The exercise may be stopped by clicking on Stop and restarted with Restart.

(10) The exercise can be moved from event to event by clicking on Stop and then Next.

(11) The exercise speed (time) can be increased by clicking on Stop and then moving the control bar.

NOTE

- **Firing results will not be presented with multiple card selected.**

- **Firing results will be presented as an impact related to the panel target fired upon. During force-on-force exercises, the results of firing are found in target system result.**

- **Target system results will be presented as an impact point on the target silhouette where the round hit. A RED target silhouette indicates a high probability of KILL and BLUE target silhouette indicates HIT NO KILL.**

(12) Double click on firing result. The following detailed information is provided.

        (a) ammunition fired
        (b) actual range to target
        (c) crew range selected
        (d) impact point in azimuth and elevation

(13) Double click on target result. The following detailed information is provided.

        (a) ammunition impacting
        (b) impact point in azimuth and elevation
        (c) aspect angle of impact

(14) Using the computer mouse, double click on vehicle and vehicle related information will be provided. This will also provide a means to change the reference vehicle by clicking on the Show Events block.